

## **THE LIMIT SET OF THE RENORMALIZATION OPERATOR FOR MULTIMODAL MAPS**

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**Abstract:** Deep renormalizations of an infinitely renormalizable real analytic multimodal map are multimodal maps of type  $N$  for some positive integer  $N$ . Roughly speaking, multimodal maps of type  $N$  are compositions of  $N$  unimodal maps. In this talk, we will show the existence of the full renormalization horseshoe for multimodal maps of type  $N$ . Moreover, the renormalization operator is exponentially contracting along the hybrid leaves. As a consequence, any orbit of a real analytic multimodal map under the renormalization operator is asymptotic to the union of these horseshoes.